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Transfollicular elimination of sebaceous glands in a patient with disseminate and recurrent infundibulofolliculitis

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ABSTRACT

Disseminate and recurrent infundibulofolliculitis (DRIF) is a rare form of folliculitis characterized by multiple papules widely distributed on the trunk and extremities. We present a 37-year-old man with confirmed DRIF complicated by transfollicular elimination of the sebaceous unit, an additional finding of DRIF that has rarely been reported.

KEYWORDS Disseminate; DRIF; folliculitis; infundibulofolliculitis; perifollicular; recurrent; sebaceous

Disseminate and recurrent infundibulofolliculitis (DRIF) is a rare form of folliculitis that most often occurs in people with darkly pigmented skin.[1] This condition is characterized by multiple papules widely distributed on the trunk and extremities. These papules may be pruritic but can also be asymptomatic and remain from weeks to years. Histopathology commonly reveals chronic perifollicular infiltrate of the infundibulum. Other less common findings include spongiosis, follicular dilatation, fibrinoid necrosis around the follicle, and the presence of melanophages.[2] We report a case of DRIF complicated by transfollicular elimination of the sebaceous unit. This additional finding of DRIF has rarely been reported in the literature.

CASE REPORT

A 37-year-old man with dark pigmented skin presented to the clinic with a 15-year history of >300 pruritic perifollicular papules on his chest, back *(Figure 1a–1b)*, elbow, buttocks, and legs. The patient had no personal or family history of severe acne, hidradenitis suppurativa, or inflammatory bowel disease. He first noticed these papules when deployed in Afghanistan and reported increased pruritus in the heat and with sweat. He was previously diagnosed with papular eczema and later DRIF.

A 3 mm punch biopsy of one papule was performed to confirm the prior diagnosis. Histologic examination was significant for mononuclear inflammatory infiltrate surrounding the infundibulum of the hair follicle and chronic perifollicular inflammation, confirming the diagnosis of DRIF. An additional finding of complete transfollicular elimination of the sebaceous unit through the epidermis was noted *(Figure 1c–1d)*, a finding that has rarely been reported in DRIF. The biopsy also showed an occluded, dilated follicular sebaceous unit and intracorneal neutrophils. Grocott methenamine silver stain identified occasional Pityrosporum yeast.

The patient had previously been treated with topical steroids, oral steroids, doxycycline, and tretinoin resulting in mild relief of pruritus but without resolution of papules. Treatment with fluconazole was initiated due to Pityrosporum yeast found on biopsy and led to mild improvement. Oral isotretinoin was the planned next step in treatment, but the patient was lost to follow-up after resolution of pruritus.

DISCUSSION

DRIF was originally described by Hitch and Lund in 1968 as a benign but bothersome condition affecting young men with darkly pigmented skin.[1] There is no known etiology. DRIF is characterized by widespread, flesh-colored papules in stereotypical areas such as the trunk and extremities. Other less commonly reported presentations include a linear distribution of papules along neck creases.[2]

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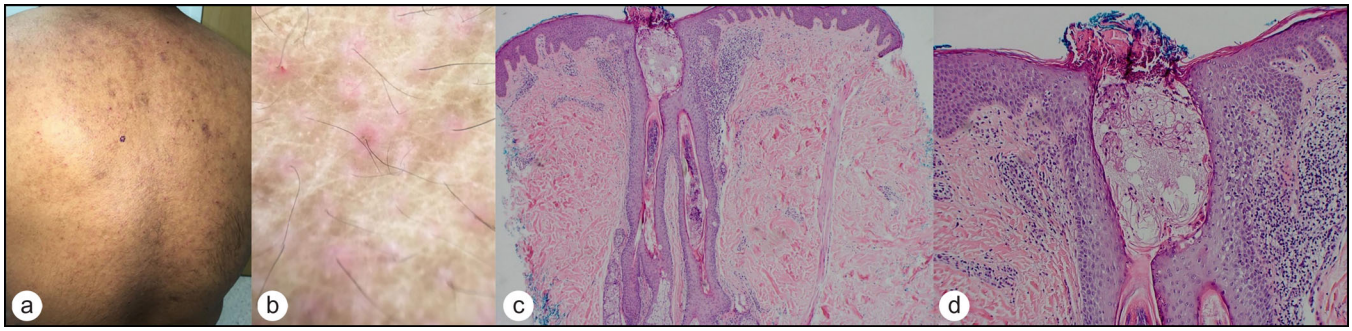

Figure 1. **(a)** Perifollicular papules with postinflammatory hyperpigmentation. **(b)** Close-up view of lesions under dermoscopy. **(c, d)** Biopsy (low and high magnification) showed complete transfollicular elimination of the sebaceous unit through the epidermis and an occluded, dilated, follicular sebaceous unit with chronic perifollicular inflammation and intracorneal neutrophils.

Histological examination revealing chronic perifollicular inflammation in association with typical papule distribution allows for a diagnosis of DRIF. Common symptoms include pruritus, which can be exacerbated in hot climates and may be significant to the degree of self-excoriation, but papules may also be asymptomatic. These papules are subject to relapse and remission, although our patient experienced persistent papules for an extended period of time.

Differential diagnoses for DRIF include bacterial and fungal folliculitis, follicular eczema, keratosis pilaris, and truncal acne, among others.[3] Although rare Pityrosporum yeast were demonstrated on biopsy, their presence in only some of the follicles make this diagnosis less likely. Follicular eczema is characterized by inflammatory infiltrate not limited to the infundibulum of the hair follicle.[2] Keratosis pilaris is clinically significant for hyperkeratinization.[2] Lesions may be differentiated from truncal acne vulgaris by histopathology revealing follicular dilation, increased sebum production, and accumulation of keratin.[4] DRIF has been associated with other dermatologic conditions such as hidradenitis suppurativa, a chronic inflammatory disease of the pilosebaceous unit, especially in patients with trisomy 21.[5]

There is no established treatment for DRIF, and most treatment regimens are anecdotal.[2] Topical steroids have largely been ineffective, a feature that distinguishes DRIF from atopic dermatitis.[6] Psoralen and long-wave ultraviolet radiation therapy were effective in one reported case.[7] Doxycycline and tretinoin were ineffective in resolving papules in our patient.

Transfollicular elimination of the sebaceous unit is an important finding that may aid in the diagnosis of DRIF.

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